

AMENDMENTS TO THE CLAIMS

1-33. (Canceled)

34. (Currently amended) A method for delivering a therapeutic or diagnostic agent to a cell, comprising:

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(a) treating a cell with a ~~combination~~ composition consisting essentially of a transport agent and a therapeutic or diagnostic agent in an amount sufficient to be, ~~wherein the combination~~ is taken into the cell by endocytosis to provide an endosome having an endosomal membrane and containing the ~~combination~~ composition, wherein the transport agent is effective in disrupting the endosomal membrane, ~~and~~ wherein the transport agent comprises a polycarboxylic acid polymer that is hydrophilic at about pH 7.4 and hydrophobic at pH from about 5.1 to about 5.5, and wherein the polymer is selected from the group consisting of poly(ethylacrylic acid), poly(propylacrylic acid), poly(butylacrylic acid), and mixtures thereof; and

(b) releasing the therapeutic or diagnostic agent from the endosome into the cell cytoplasm by the action of the transport agent on the endosomal membrane.

35. (Previously presented) The method of Claim 34, further comprising subjecting the treated cell to a stimulus to enhance the release of the therapeutic or diagnostic agent from the endosome to cytoplasm.

36. (Previously presented) The method of Claim 35, wherein the stimulus is ultrasound.

37. (Previously presented) The method of Claim 34, wherein the transport agent is hydrophilic at pH from about 6.8 to about 7.5, and hydrophobic at pH from about 5.0 to about 6.5.

38-56. (Canceled)

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57. (Previously presented) The method of Claim 34, wherein the therapeutic agent comprises a nucleic acid selected from the group consisting of a nucleoside, a nucleotide, and an oligonucleotide.

58. (Previously presented) The method of Claim 34, wherein the therapeutic agent comprises a protein, lipoprotein, glycoprotein, or peptide.

59. (Previously presented) The method of Claim 34, wherein the therapeutic agent comprises a sugar or polysaccharide.

60. (Previously presented) The method of Claim 34, wherein the therapeutic agent comprises a toxin.

61. (Previously presented) The method of Claim 34, wherein the therapeutic agent comprises a toxin selected from the group consisting of ricin, diphtheria toxin B chain, adenovirus peptide, influenza virus peptide, GALA peptide, abrin, modeccin, Pseudomonas exotoxin, bryodin, mistletoe lectin, Shiga toxin, Escherichia coli labile toxin, Pertussis toxin, cholera toxin, anthrax toxin, viscumin, spaorin, gelonin, momordin, trichlosanthin, and pokeweed antiviral protein.

62. (Previously presented) The method of Claim 34, wherein the therapeutic agent comprises ricin.

63. (Previously presented) The method of Claim 34, wherein the transport agent is poly(propylacrylic acid) and the therapeutic agent is ricin.

64. (Previously presented) The method of Claim 34, wherein the diagnostic agent comprises a radiolabeled agent.

65. (Previously presented) The method of Claim 34, wherein the diagnostic agent comprises a fluorescecently labeled agent.

66. (Previously presented) The method of Claim 34, wherein the diagnostic agent comprises an enzymatically labeled agent.

67. (Previously presented) The method of Claim 34, wherein the diagnostic agent comprises a contrast agent.

68. (Previously presented) The method of Claim 34, wherein the therapeutic or diagnostic agent is covalently coupled to the transport agent.

69. (Previously presented) The method of Claim 34, wherein the therapeutic or diagnostic agent is ionically coupled to the transport agent.

70-73. (Canceled)

74. (Currently amended) A composition for delivering a therapeutic or diagnostic agent to a cell, ~~comprising a combination~~ consisting essentially of (a) a transport agent and (b) a therapeutic or diagnostic agent, wherein the transport agent is effective in disrupting the endosomal membrane, ~~and~~ wherein the transport agent comprises a polycarboxylic acid polymer that is hydrophilic at about pH 7.4 and hydrophobic at pH from about 5.1 to about 5.5, wherein the polymer is selected from the group consisting of poly(ethylacrylic acid), poly(propylacrylic acid), poly(butylacrylic acid), and mixtures thereof.

75. (Previously presented) The composition of Claim 74, wherein the therapeutic or diagnostic agent is covalently coupled to the transport agent.

76. (Previously presented) The composition of Claim 74, wherein the therapeutic or diagnostic agent is ionically coupled to the transport agent.

77. (Previously presented) The composition of Claim 74, wherein the transport agent is hydrophilic at pH from about 6.8 to about 7.5, and hydrophobic at pH from about 5.0 to about 6.5.

78-100. (Canceled)

101. (Currently amended) A method for delivering a therapeutic or diagnostic agent to a cell, ~~comprising~~ consisting essentially of:

(a) treating a cell with ~~a combination of~~ a transport agent and a therapeutic or diagnostic agent, wherein the transport agent and therapeutic or diagnostic agent combination is taken into the cell by endocytosis to provide an endosome having an endosomal membrane and containing the the transport agent and therapeutic or diagnostic agent combination, and wherein the transport agent comprises a poly(alkylacrylic acid) selected from the group consisting of poly(ethylacrylic acid), poly(propylacrylic acid), poly(butylacrylic acid), and mixtures thereof; and

(b) releasing the therapeutic or diagnostic agent from the endosome into the cell cytoplasm by the action of the transport agent on the endosomal membrane.

102. (Currently amended) A composition for delivering a therapeutic or diagnostic agent to a cell, ~~comprising~~ consisting essentially of a combination of (a) a transport agent and (b) a therapeutic or diagnostic agent, wherein the transport agent comprises a poly(alkylacrylic acid) selected from the group consisting of poly(ethylacrylic acid), poly(propylacrylic acid), poly(butylacrylic acid), and mixtures thereof.

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